

Example #6: A small light bulb is connected to 3.0 V and will draw 150 mA.

(a) What is the net resistance of the bulb?

(b) If the voltage dropped to 2.0 V, how would the current change?

$$a) \quad 150 \text{ mA} = 0.150 \text{ A}$$

$$R = \frac{V}{I} = \frac{3.0}{0.15} = \boxed{20 \, \Omega}$$

$$b) \quad I = \frac{V}{R} = \frac{3.0}{20} = \boxed{1.2 \times 10^{-2} \text{ A}}$$